Amendments to the Claims

Please cancel claims 12 and 24. Please amend claims 1, 13, and 25. Please add new claim 26. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1.   (Currently amended) A telecommunications switch comprising:

an optical switch coupled to a plurality of optical inputs [[;]] and a plurality of optical outputs;

a switch controller being coupled to the optical switch, the switch controller operating the [[an]] optical switch that operates with a schedule not directly determined by [[the]] an input stream of data units, the schedule of the optical switch being changed to have unbalanced periods in response to unbalance in traffic; [[and]]

a plurality of reordering units coupled to the optical switch through an electrical-optical converter, the plurality of reordering units buffering data units of received data streams into queues for each input/output pair of the optical switch and that rearrange rearranging the order of the data units within the data streams to correspond to the schedule of the switch; and

the switch controller changing the schedule of the optical switch to have unbalanced periods in response to unbalance in traffic, the schedule being changed in response to information provided by the plurality of reordering units regarding the number of reordered data units in the queues for each input/output pair.

2.   (Original) A telecommunications switch as claimed in claim 1 wherein the switch is a crossbar.

3.   (Original) A telecommunications switch as claimed in claim 1 wherein the reordering units rearrange the order of data units in an input data stream.

4.   (Original) A telecommunications switch as claimed in claim 1 wherein the reordering units rearrange the order of data units in an output data stream.

5.   (Original) A telecommunications switch as claimed in claim 1 wherein the switch is a multi-stage interconnection network.

6.   (Original) A telecommunications switch as claimed in claim 1 wherein each reordering unit is a time-slot interchanger.

7.   (Original) A telecommunications switch as claimed in claim 6 wherein each time-slot interchanger contains a plurality of FIFOs.

8.   (Original) A telecommunications switch as claimed in claim 7 wherein the FIFOs are implemented as circular buffers in a single dual port memory.

9.   (Canceled)

10.   (Canceled)

11.   (Original) A telecommunications switch as claimed in claim 1 wherein the switch schedule is determined by the average load between inputs and outputs.

12.   (Canceled)

13.   (Currently amended) The method of switching data streams comprising:

operating an optical switch with a schedule not directly determined by [[the]] an input stream of data units;, the schedule of the optical switch being changed to have unbalanced periods in response to unbalance in traffic; and

converting optical data streams into electrical data streams;

buffering data units of the converted data streams into queues for each input/output pair of the optical switch and rearranging the order of the data units within the data streams to correspond to the schedule of the switch; and

changing the schedule of the optical switch to have unbalanced periods in response to unbalance in traffic, the switch schedule being changed in response to information regarding the number of reordered data units in the queues for each input/output pair.

14.   (Original) A method as claimed in claim 13 wherein the switch is a crossbar.

15.   (Original) A method as claimed in claim 13 wherein the rearranged data stream is an input data stream.

16.   (Original) A method as claimed in claim 13 wherein the rearranged data stream is an output data stream.

17.   (Original) A method as claimed in claim 13 wherein the switch is a multi-stage interconnection network.

18.   (Original) A method as claimed in claim 13 wherein the data stream is rearranged in a time-slot interchanger.

19.   (Original) A method as claimed in claim 18 wherein each time-slot interchanger contains a plurality of FIFOs.

20. (Original) A method as claimed in claim 19 wherein the FIFOs are implemented as circular buffers in a single dual port memory.

21. (Canceled)

22. (Canceled)

23. (Original) A method as claimed in claim 13 wherein the switch schedule is determined by the average load between inputs and outputs.

24. (Canceled)

25. (Currently amended) A telecommunications switch comprising:

a plurality of optical inputs;

a plurality of optical outputs;

switch means for switching optical inputs to optical outputs with a changing schedule; [[and]]

control means for operating the switch means with a schedule not directly determined by an input stream of data units;

reordering means for buffering data units of received data streams into queues for each input/output pair of the optical switch and rearranging the order of the data units within the data streams to correspond to the schedule of the switch means, the reordering means beingcoupled to the switch means through an electrical-optical converter; and

the control means changing the schedule of the optical switch to have unbalanced periods in response to unbalance in traffic, the schedule being changed in response to information provided by the reordering means regarding the number of reordered data units in the queues for each input/output pair.

26.   (New) A telecommunications switch comprising:

an optical switch coupled to a plurality of optical inputs and a plurality of optical outputs;

a switch controller being coupled to the optical switch, the switch controller operating the optical switch with a schedule not directly determined by an input stream of data units;

a plurality of reordering units coupled to the plurality of optical inputs through an electrical-optical converter, the plurality of reordering units rearranging the order of the data units within the input stream to correspond to the schedule of the switch by buffering the data units into queues for each input/output pair of the optical switch and forwarding the data units from the output queues according to the schedule of the switch; and

the switch controller changing the schedule of the optical switch to have unbalanced periods in response to unbalance in traffic, the schedule being changed in response to information provided by the plurality of reordering units regarding the number of reordered data units in the queues for each input/output pair.